



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/614,352

07/07/2003

Peter M. Bonutti

782-A03-003-1

7916

33771

7590

08/21/2008

PAUL D. BIANCO

Fleit Gibbons Gutman Bongini & Bianco PL

21355 EAST DIXIE HIGHWAY

SUITE 115

MIAMI, FL 33180

EXAMINER

YABUT, DIANE D

ART UNIT

PAPER NUMBER

3734

MAIL DATE

DELIVERY MODE

08/21/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/614,352	BONUTTI, PETER M.	
	Examiner	Art Unit	
	DIANE YABUT	3734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,8,10-21 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,8,10-21 and 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to applicant's amendment received on 04/15/2008.

The examiner acknowledges the amendments made to the claims.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 29 recite the limitation "said abutting location" in lines 12 and 13, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 3734

4. Claims 1-3, 8, 10, 11, 18-20, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by **Adams** (U.S. Patent No. **6,099,552**).

Claims 1-3, 8, 10, 11, 18-20, and 29: Adams discloses a cylindrical shaft or body portion **100** movable through an opening in body tissue made of a metal (col. 2, lines 46-50) capable of use in soft tissue or bone defining a longitudinal central axis and including a first end and a second end, the second end including a pointed end portion **102** being conical in shape and operative to pierce body tissue and form an opening when a force is applied against a trailing end of the cylindrical body in a direction extending along the longitudinal central axis of the cylindrical body, and having a central axis which is coincident with the longitudinal central axis of the cylindrical body, and a first passage **104** being substantially parallel each extending through the body portion orthogonal to the longitudinal central axis which allow for the threading of a suture, said first passage located in close abutting proximity to said second end, whereby a suture threaded through said first passage may be pulled to thereby rotate the implant and move said second end in a pulling direction, said abutting location providing improved rotational leverage as compared to a location more distal to said second end, wherein the first passage is formed proximate said second conical end portion extending through the cylindrical body in a direction transverse to the longitudinal central axis of the cylindrical body, and a second passage **104** extending through the cylindrical body substantially parallel to the first passage and disposed further from said conical end portion than said first passage or further from said second end than said first passage or

Art Unit: 3734

being located proximate mid-length of the cylindrical body, and allowing for threading of a suture (Figure 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Adams** (U.S. Patent No. **6,099,552**).

Claims 12-17: Adams discloses the claimed device except for the cylindrical shaft being made of allogenic, autogenic, xenogenic, cortical bone, or a single piece of freeze dried bone, or made of a material selected from the group consisting of a metal, metal alloy, biodegradable material and bioerodible material, wherein the suture is secured relative to a body tissue being soft tissue or bone. It would have been obvious to one of ordinary skill in the art to use any of the above materials in either soft tissue or bone with the device of Adams, since it was known in the art that these materials are used with suture devices with soft tissue or bone.

Art Unit: 3734

7. Claims 21 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Adams** (U.S. Patent No. **6,099,552**) in view of **Whittaker** (U.S. Patent No. **5,417,712**).

Claims 21 and 26-27: Adams discloses the claimed device (see paragraph 4 above), except for having the first passage being formed to extend partially through the cylindrical body and partially through the pointed end portion.

Whittaker teaches a tissue-suturing apparatus with a passage used for threading suture that is formed partially in body portion **6** and partially in the pointed end portion, as seen in Figures 19, 21A, 22, 25, 28, and 36. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Adams by having one of the passages being formed partially in the body portion and partially in the pointed end portion, as taught by Whittaker, since applicant has not disclosed that having the passage being formed partially in the body portion and partially in the pointed end portion solves any stated problem or is for any particular purpose and it appears that the device of Adams would perform equally well with a passage formed partially in the body portion and partially at its pointed end.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Adams** (U.S. Patent No. **6,099,552**) in view of **Schwartz** (U.S. Patent No. **6,306,159**) and **Hayhurst** (U.S. Patent No. **4,741,330**).

Claim 24: Adams discloses the claimed device, as described in paragraph 4 above, except for a suture extending and being threaded through said first passage and second

Art Unit: 3734

passage and being operative to rotate when under tension, and a retainer connected to the suture for maintaining the tension in the suture which has a first configuration in which the retainer is freely slidable along the suture and a second configuration in which the retainer is secured and connected to the suture for maintaining the tension in the suture.

Schwartz teaches a suture **40** being passed through and extending through first **24** and second **26** passages and being threaded through said first passage and said second passage, wherein the suture is operative to rotate an anchor **20** when under tension, and a retainer connected to the suture for maintaining the tension in the suture (Figures 4-7; abstract, col. 2, lines 14-16). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Adams with the suture and retainer of Schwartz, in order to close a tissue defect, thereby promoting healing (col. 4, lines 11-13).

Hayhurst teaches a retainer having a first configuration in which the retainer is freely slidable along the suture and a second configuration in which the retainer is secured and connected to the suture for maintaining the tension in the suture (see abstract, Figures 13-14, col. 8, lines 25-32). It would have been obvious to one of ordinary skill in the art at the time of invention to provide a freely slidable retainer along the suture and being secured to the suture in order to maintain tension, as taught by Hayhurst, to Adams in order to facilitate applying and maintaining tension to the sutures to properly promote tissue healing (col. 3, lines 29-35).

Art Unit: 3734

9. Claim 25 rejected under 35 U.S.C. 103(a) as being unpatentable over **Adams** (U.S. Patent No. **6,099,552**) in view of **Schwartz** (U.S. Patent No. **6,306,159**) and **Hayhurst** (U.S. Patent No. **4,741,330**), as applied to claim 24 above, and further in view of **Egan** (U.S. Patent No. **6,106,545**).

Claim 25: Adams, Schwartz, and Hayhurst disclose the claimed device as discussed above, except for a retainer made of a material that becomes flowable when ultrasonic vibratory energy is applied.

Egan teaches a retainer **24** connected to a suture **22** that is made of a material that becomes flowable when ultrasonic vibratory energy is applied so that no knot is required to fix the suture in place (col. 3, lines 5-30). It would have been obvious to one of ordinary skill to provide a retainer that becomes flowable when ultrasonic vibratory energy is applied, as taught by Egan, to Adams, Schwartz, and Hayhurst since it was known in the art that retainers maintain tension in sutures and that retainers made of flowable material are beneficial in avoiding the challenging step of knotting the suture in place.

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Adams** (U.S. Patent No. **6,099,552**) in view of **Schwartz** (U.S. Patent No. **6,306,159**) and **Hayhurst** (U.S. Patent No. **4,741,330**), as applied to claim 24 above, and further in view of **Huxel** (U.S. Patent No. **6,503,259**).

Claim 28: Adams, Schwartz, and Hayhurst disclose the claimed device as discussed above, except for a force distribution member being disposed between the retainer and the body tissue.

Huxel teaches a force distribution member **16** being disposed between a retainer and body tissue (Figure 8). It would have been obvious to one of ordinary skill in the art at the time of invention to provide a force distribution member, as taught by Huxel, to Adams, Schwartz, and Hayhurst in order to avoid over compression in one portion of tissue and to evenly distribute force on the surface of tissue (col. 4, lines 12-16).

Response to Arguments

11. Applicant's arguments with respect to claims 1-3, 8, 10-21, and 24-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIANE YABUT whose telephone number is (571)272-6831. The examiner can normally be reached on M-F: 9AM-4PM EST.

Art Unit: 3734

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on (571) 272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diane Yabut/
Examiner, Art Unit 3734

/Todd E Manahan/
Supervisory Patent Examiner, Art Unit 3731